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EXAMINER	
PHILPOTT, JUSTIN M	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/830,752	FURUKAWA, HIROSHI	
	Examiner	Art Unit	
	Justin M. Philpott	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 15, 2006 has been entered.

Response to Arguments

2. Applicant's arguments filed February 15, 2006 have been fully considered but they are not persuasive.

First, applicant argues (pages 10-11) that the prior art does not teach the new limitations added to amended claims 1 and 5. However, the newly cited art of Stilwell teaches these new limitations as discussed in the following office action. Thus, this argument is not persuasive.

Second, applicant argues (pages 11-12) that the prior art does not teach limitations of claim 3. However, as discussed in the previous office action, and repeated herein, H'mimy teaches the mobile station discussed above regarding claim 1, and further, AAPA teaches demodulating independently each of the modulated signals (e.g., via respective independent demodulation units 107-109) which pass through a plurality of the radio channels of which delay times are different, and combining the result (e.g., via combining unit 110). Further, H'mimy teaches selecting an output with higher communication quality among other possible outputs by

equalizing and demodulating steps (e.g., see col. 2, lines 19-49, col. 4, line 23 – col. 5, line 12, and FIGS. 1 and 2 regarding selection with respect to two methods following ACCs 80 and 90). Thus, applicant's argument is not persuasive.

Third, applicant argues (pages 12-13) that the prior art does not teach limitations of claim 7. However, as discussed in the previous office action, and repeated herein, H'mimy teaches an equalization filter unit (e.g., filter 95, see FIG. 1) of which frequency characteristics are inverse from that of the radio channels (e.g., see col. 4, lines 22-34), by using tap coefficients (e.g., select signals, see FIG. 2) from a channel estimation unit (e.g., ACC 80 in combination with 130 and 125). Thus, applicant's argument is not persuasive.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of U.S. Patent No. 5,912,876 to H'mimy, further in view of U.S. Patent No. 5,235,612 to Stilwell et al.

Regarding claim 1, AAPA teaches a mobile station receiving method on a down channel in a CDMA cellular system (specification, page 1, lines 15-26) in which a base station modulates, by using orthogonal pseudo random codes, transmission signals towards a plurality of mobile stations (specification, page 1, line 22 to page 2, line 4), transmits the modulated signals

synchronously, while the mobile stations receive the modulated signals distorted by a plurality of radio channels of which delay times are different (specification, page 2, lines 3-15) (e.g., see also, generally, specification, pages 1-4), however, may not specifically disclose frequency characteristics of an equalization filter are inverse to an estimation result.

H'mimy also teaches a CDMA system such as in AAPA, and further, specifically teaches the system is characterized in that a mobile station comprises an equalization filter (e.g., filter 95, see FIG. 1) and a transmission estimation unit (e.g., accumulator 90), wherein the transmission estimation unit (e.g., accumulator 90) outputs an estimation result (e.g., estimated frequency response, see col. 4, lines 18-41) of frequency characteristics of a transmission channel (e.g., channel 50) and sets up the frequency characteristics of the equalization filter (e.g., filter 95) such that the frequency characteristics of the equalization filter are inverse to the estimation result (e.g., see col. 4, lines 22-34). Additionally, the teachings of H'mimy provide improved channel estimation by simplifying operation and resulting in instantaneous results (see col. 2, lines 5-49 and col. 4, lines 35-41). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the CDMA teachings of H'mimy to the CDMA system of AAPA in order to provide improved channel estimation by simplifying operation and resulting in instantaneous results. However, AAPA in view of H'mimy may not specifically disclose equalizing spread spectrum signals based on the frequency response of the plurality of radio channels to eliminate channel distortion.

Stilwell, like AAPA in view of H'mimy, teaches a method of CDMA wireless communication (e.g., see abstract), and further, specifically teaches equalizing spread spectrum signals (e.g., see col. 5, line 5 – col. 7, line 18 regarding spread spectrum signals and filtering)

based on the frequency response of the plurality of radio channels (e.g., see col. 8, line 44 – col. 9, line 33, wherein the composite spread spectrum signal used with filtering is generated to comprise the sum of all spread spectrum signals in a frequency band from the transmission sites) to eliminate channel distortion (e.g., wherein interference is cancelled, see col. 5, lines 6-14 and col. 8, lines 33-35). Additionally, the teachings of Stilwell provide for the removal of spreading code interference and provide an increase in the number of users for each CDMA channel for greater system efficiency (e.g., see col. 8, lines 37-43; see also col. 5, lines 15-27). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the CDMA teachings of Stilwell to the CDMA system of AAPA in view of H'mimy in order to provide for the removal of spreading code interference and provide an increase in the number of users for each CDMA channel for greater system efficiency (e.g., see Stilwell at col. 8, lines 37-43; see also col. 5, lines 15-27).

Regarding claim 5, AAPA in view of H'mimy teach the a communication system and a mobile station as discussed above regarding claim 1, and further, AAPA teaches an apparatus and method comprising the elements and respective steps of: a frequency conversion unit (e.g., frequency conversion unit 102 in prior art FIG. 5) for converting the modulation signals received by an antenna (e.g., antenna 101) into base band signals (e.g., see specification, page 2, lines 17-19), a channel estimation unit (e.g., detection unit 106) for detecting frequency characteristics of the radio channels on the basis of the modulated signals (e.g., see specification, page 2, line 19 to page 3, line 2), and a demodulation unit (e.g., 103-105 in conjunction with 107-109) for de-spreading and demodulating outputs (e.g., see specification page 2, line 23 to page 3, line 6). Further, as discussed above, H'mimy teaches an equalization filter unit (e.g., filter 95, see FIG.

1) of which frequency characteristics are inverse from that of the radio channels (e.g., see col. 4, lines 22-34), by using tap coefficients (e.g., select signals, see FIG. 2) from a channel estimation unit (e.g., ACC 80 in combination with 130 and 125). Additionally, as discussed above, the teachings of H'mimy provide improved channel estimation by simplifying operation and resulting in instantaneous results (see col. 2, lines 5-49 and col. 4, lines 35-41). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the CDMA teachings of H'mimy to the CDMA system of AAPA in order to provide improved channel estimation by simplifying operation and resulting in instantaneous results. However, AAPA in view of H'mimy may not specifically disclose equalizing spread spectrum signals based on the frequency response of the plurality of radio channels to eliminate channel distortion.

Stilwell, like AAPA in view of H'mimy, teaches a method of CDMA wireless communication (e.g., see abstract), and further, specifically teaches equalizing spread spectrum signals (e.g., see col. 5, line 5 – col. 7, line 18 regarding spread spectrum signals and filtering) based on the frequency response of the plurality of radio channels (e.g., see col. 8, line 44 – col. 9, line 33, wherein the composite spread spectrum signal used with filtering is generated to comprise the sum of all spread spectrum signals in a frequency band from the transmission sites) to eliminate channel distortion (e.g., wherein interference is cancelled, see col. 5, lines 6-14 and col. 8, lines 33-35). Additionally, the teachings of Stilwell provide for the removal of spreading code interference and provide an increase in the number of users for each CDMA channel for greater system efficiency (e.g., see col. 8, lines 37-43; see also col. 5, lines 15-27). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the

CDMA teachings of Stilwell to the CDMA system of AAPA in view of H'mimy in order to provide for the removal of spreading code interference and provide an increase in the number of users for each CDMA channel for greater system efficiency (e.g., see Stilwell at col. 8, lines 37-43; see also col. 5, lines 15-27).

5. Claims 3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of H'mimy.

Regarding claims 3 and 6, AAPA in view of H'mimy teaches the mobile station discussed above regarding claim 1, and further, AAPA teaches demodulating independently each of the modulated signals (e.g., via respective independent demodulation units 107-109) which pass through a plurality of the radio channels of which delay times are different, and combining the result (e.g., via combining unit 110). Still further, while AAPA may not specifically disclose an additional method of using a filter with frequency characteristics inverse to that of the radio channels, such a method is taught by H'mimy as discussed above regarding claim 1. That is, H'mimy teaches a mobile station comprises an equalization filter (e.g., filter 95, see FIG. 1) and a transmission estimation unit (e.g., accumulator 90), wherein the transmission estimation unit (e.g., accumulator 90) outputs an estimation result (e.g., estimated frequency response, see col. 4, lines 18-41) of frequency characteristics of a transmission channel (e.g., channel 50) and sets up the frequency characteristics of the equalization filter (e.g., filter 95) such that the frequency characteristics of the equalization filter are inverse to the estimation result (e.g., see col. 4, lines 22-34). Further, H'mimy teaches selecting an output with higher communication quality among other possible outputs by equalizing and demodulating steps (e.g., see col. 2, lines 19-49, col. 4,

line 23 – col. 5, line 12, and FIGS. 1 and 2 regarding selection with respect to two methods following ACCs 80 and 90). Additionally, the teachings of H'mimy provide improved channel estimation by simplifying operation and resulting in instantaneous results (see col. 2, lines 5-49 and col. 4, lines 35-41). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the CDMA teachings of H'mimy to the CDMA system of AAPA in order to provide improved channel estimation by simplifying operation and resulting in instantaneous results.

Regarding claim 7, AAPA in view of H'mimy teach the a communication system and a mobile station as discussed above regarding claim 1, and further, AAPA teaches an apparatus and method comprising the elements and respective steps of: a frequency conversion unit (e.g., frequency conversion unit 102 in prior art FIG. 5) for converting the modulation signals received by an antenna (e.g., antenna 101) into base band signals (e.g., see specification, page 2, lines 17-19), a channel estimation unit (e.g., detection unit 106) for detecting frequency characteristics of the radio channels on the basis of the modulated signals (e.g., see specification, page 2, line 19 to page 3, line 2), and a demodulation unit (e.g., 103-105 in conjunction with 107-109) for de-spreading and demodulating outputs (e.g., see specification page 2, line 23 to page 3, line 6). Further, as discussed above, H'mimy teaches an equalization filter unit (e.g., filter 95, see FIG. 1) of which frequency characteristics are inverse from that of the radio channels (e.g., see col. 4, lines 22-34), by using tap coefficients (e.g., select signals, see FIG. 2) from a channel estimation unit (e.g., ACC 80 in combination with 130 and 125). Additionally, as discussed above, the teachings of H'mimy provide improved channel estimation by simplifying operation and resulting in instantaneous results (see col. 2, lines 5-49 and col. 4, lines 35-41). Thus, at the time

of the invention it would have been obvious to one of ordinary skill in the art to apply the CDMA teachings of H'mimy to the CDMA system of AAPA in order to provide improved channel estimation by simplifying operation and resulting in instantaneous results.

Regarding claim 8, AAPA teaches a mobile station receiving method on a down channel in a CDMA cellular system (specification, page 1, lines 15-26) in which a base station modulates, by using orthogonal pseudo random codes, transmission signals towards a plurality of mobile stations (specification, page 1, line 22 to page 2, line 4), transmits the modulated signals synchronously, while the mobile stations receive the modulated signals distorted by a plurality of radio channels of which delay times are different (specification, page 2, lines 3-15) (e.g., see also, generally, specification, pages 1-4), which is characterized in that the mobile station comprises a first receiving unit (e.g., unit 102 in FIG. 5), a second receiving unit (e.g., unit 107) and a selection unit (e.g., unit 110), wherein the first receiving unit (e.g., unit 102) comprises a frequency conversion unit (e.g., frequency conversion unit 102) for converting the modulated signals received by an antenna into base band signals (specification, page 2, lines 17-19); and a demodulator (e.g., demodulation unit 107) for demodulating outputs of a unit of which inputs are base band signals (specification, page 2, line 17 to page 3, line 6). However, AAPA may not specifically disclose a channel estimation unit and a filter unit with frequency characteristics of an equalization filter are inverse to an estimation result.

H'mimy also teaches a CDMA system such as in AAPA, and further, specifically teaches the system is characterized in that a mobile station comprises a filter unit (e.g., filter 95, see FIG. 1) and a channel estimation unit (e.g., accumulator 90), wherein the channel estimation unit (e.g., accumulator 90) detects frequency characteristics of radio channels on the basis of modulated

signals and outputs an estimation result (e.g., estimated frequency response, see col. 4, lines 18-41) of the frequency characteristics of a the radio channels (e.g., channel 50) and sets up the frequency characteristics of the filter unit (e.g., filter 95) such that the frequency characteristics of the filter are inverse to the estimation result (e.g., see col. 4, lines 22-34). Further, H'mimy teaches a second receiving unit comprises a combining unit for selecting an output with higher communication quality among other possible outputs by equalizing and demodulating steps (e.g., see col. 2, lines 19-49, col. 4, line 23 – col. 5, line 12, and FIGS. 1 and 2 regarding selection with respect to two methods following ACCs 80 and 90). Also, as discussed above, AAPA teaches demodulating independently each of the modulated signals (e.g., via respective independent demodulation units 107-109) which pass through a plurality of the radio channels of which delay times are different, and combining the result (e.g., via combining unit 110). Additionally, the teachings of H'mimy provide improved channel estimation by simplifying operation and resulting in instantaneous results (see col. 2, lines 5-49 and col. 4, lines 35-41). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the CDMA teachings of H'mimy to the CDMA system of AAPA in order to provide improved channel estimation by simplifying operation and resulting in instantaneous results.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of H'mimy in view of Stilwell, further in view of prior art recited in U.S. Patent No. 6,307,879 to Moriyama.

Regarding claim 2, AAPA in view of H'mimy in view of Stilwell teach the mobile station discussed above regarding claim 1, respectively, however may not specifically describe the

filtering that is utilized. Moriyama also teaches a mobile station in a CDMA system (e.g., see col. 18, lines 56-59) and further, specifically describes a filter which is well known in the art of CDMA systems (e.g., prior art FIG. 5), wherein the filter comprises: a plurality of delay circuits which are connected in series (e.g., delay circuits 16a, see FIG. 5 and col. 3, line 44 – col. 4, line 61); a plurality of multipliers (e.g., multipliers 16b) each of which multiples a prescribed weight coefficient (e.g., weight factor, see col. 3, lines 53-63) by the output from each delay circuit (e.g., delay circuits 16a); and an adder (e.g., adder 16c) for adding the outputs from said multipliers (e.g., multipliers 16b), wherein modulated signals are equalized adaptively (e.g., filtering is adaptive, see col. 3, lines 44-52) as the distortions of the radio channels changes. Also, this well known filter (prior art FIG. 5) disclosed by Moriyama provides improved operation by minimizing error power (e.g., see col. 4, lines 62-63). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the well known filter embodiment of FIG. 5 in Moriyama to the filter of AAPA in view of H'mimy in view of Stilwell since such a teaching is well known in the art of filtering in a CDMA system and in order to provide improved operation by minimizing error power (e.g., see Moriyama at col. 4, lines 62-63).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of H'mimy, further in view of prior art recited in U.S. Patent No. 6,307,879 to Moriyama.

Regarding claim 4, AAPA in view of H'mimy teach the mobile station discussed above regarding claim 3, respectively, however may not specifically describe the filtering that is utilized. Moriyama also teaches a mobile station in a CDMA system (e.g., see col. 18, lines 56-

59) and further, specifically describes a filter which is well known in the art of CDMA systems (e.g., prior art FIG. 5), wherein the filter comprises: a plurality of delay circuits which are connected in series (e.g., delay circuits 16a, see FIG. 5 and col. 3, line 44 – col. 4, line 61); a plurality of multipliers (e.g., multipliers 16b) each of which multiples a prescribed weight coefficient (e.g., weight factor, see col. 3, lines 53-63) by the output from each delay circuit (e.g., delay circuits 16a); and an adder (e.g., adder 16c) for adding the outputs from said multipliers (e.g., multipliers 16b), wherein modulated signals are equalized adaptively (e.g., filtering is adaptive, see col. 3, lines 44-52) as the distortions of the radio channels changes. Also, this well known filter (prior art FIG. 5) disclosed by Moriyama provides improved operation by minimizing error power (e.g., see col. 4, lines 62-63). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the well known filter embodiment of FIG. 5 in Moriyama to the filter of AAPA in view of H'mimy since such a teaching is well known in the art of filtering in a CDMA system and in order to provide improved operation by minimizing error power (e.g., see Moriyama at col. 4, lines 62-63).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of H'mimy in view of Stilwell, further in view of U.S. Patent No. 6,347,391 to Uesugi et al.

Regarding claim 9, AAPA in view of H'mimy in view of Stilwell teach the apparatus and method discussed above regarding claim 1, respectively, however, may not specifically require performing equalization before decoding or demodulating. Uesugi, like AAPA and H'mimy and Stilwell, also teaches an apparatus and method for CDMA communications, and specifically, discloses that performing equalization before decoding or demodulating is well known in the art

(e.g., see FIG. 1 comprising equalizer 6 receiving a signal and performing equalization including compensating for distortion before sending the signal to a demodulator or decoder 7, whereafter decoded data 8 is received, see col. 1, lines 23-40). Further, Uesugi teaches the embodiment of FIG. 1 is a conventional structure well known in the art (e.g., see col. 1, lines 23-25, and see FIG. 1 comprising the PRIOR ART designation) which specifically is well known for overcoming the problem of multipath fading (e.g., see col. 1, lines 10-23). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the ordered equalization with decoding or demodulating as disclosed by Uesugi to be well known in the art to the apparatus and method of AAPA in view of H'mimy in view of Stilwell since such a teaching is both well known in the art and since such an implementation further overcomes the problem of multipath fading (e.g., see Uesugi at col. 1, lines 10-23).

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of H'mimy, further in view of U.S. Patent No. 6,347,391 to Uesugi et al.

Regarding claim 10, AAPA in view of H'mimy teach the apparatus and method discussed above regarding claim 3, respectively, however, may not specifically require performing equalization before decoding or demodulating. Uesugi, like AAPA and H'mimy, also teaches an apparatus and method for CDMA communications, and specifically, discloses that performing equalization before decoding or demodulating is well known in the art (e.g., see FIG. 1 comprising equalizer 6 receiving a signal and performing equalization including compensating for distortion before sending the signal to a demodulator or decoder 7, whereafter decoded data 8 is received, see col. 1, lines 23-40). Further, Uesugi teaches the embodiment of FIG. 1 is a

conventional structure well known in the art (e.g., see col. 1, lines 23-25, and see FIG. 1 comprising the PRIOR ART designation) which specifically is well known for overcoming the problem of multipath fading (e.g., see col. 1, lines 10-23). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the ordered equalization with decoding or demodulating as disclosed by Uesugi to be well known in the art to the apparatus and method of AAPA in view of H'mimy since such a teaching is both well known in the art and since such an implementation further overcomes the problem of multipath fading (e.g., see Uesugi at col. 1, lines 10-23).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M. Philpott whose telephone number is 571.272.3162. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571.272.3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin M Philpott

CHI PHAM
SUPERVISORY PATENT EXAMINER
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4/17/06